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ABSTRACT

According to March 1991 Current Population Survey data, 64 percent of young workers in Pennsylvania aged 15-39 have no more than a high school education. Pennsylvania is at some competitive economic development disadvantage compared to the national young adult labor force because of its lower share of more educated young workers with advanced skills. Educational attainment creates major differences in unemployment rates of young Pennsylvania workers, from 9.6 percent for high school dropouts to 4.4 percent for college graduates. The ability of the state's young workers to hold a full-time job improves with educational attainment, from 41 percent for high school dropouts, to 80 percent for high school graduates, to 88 percent for college graduates. Educational attainment is extremely important for obtaining a good job and for decent earnings. Nearly 64 percent of the state's college-educated young workers hold managerial or professional positions compared to fewer than 2 percent of high school dropouts. The average income of $25,004 for young workers with a college degree compares with an average of about $13,700 for young workers who stopped school with a high school degree and who completed some post-high school education. The poverty rate of high school dropouts is 20.3 percent, 2.8 percent for college graduates. (The narrative accompanies eight data tables.) (YLB)

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# EDUCATIONAL ATTAINMENT AND ECONOMIC DEVELOPMENT: PENNSYLVANIA'S YOUNG WORKERS IN THE 1990'S

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Gordon F. De Jong

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# EDUCATIONAL ATTAINMENT AND ECONOMIC DEVELOPMENT:

# PENNSYLVANIA'S YOUNG WORKERS IN THE 1990'S


by

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# INTRODUCTION

State economic development has two major components -- jobs and workers. The key to successful state economic development strategies is matching jobs with the size and skills of the labor force population. Desirable development policy outcomes are just as unlikely if there are not enough trained workers as if there are not enough appropriate jobs for Pennsylvania workers. Thus economic development policy must emphasize both **job development** and **human capital development**.

In the United States economy, education and experience, rather than inheritance, political affiliation, or business ownership, are the primary criteria for good jobs and successful employment for most workers. Of these two criteria, **educational attainment** is commonly recognized as **the** major economic development strategy for young workers.

* What is the educational human capital of Pennsylvania's young workers in the 1990s?

* How do Pennsylvania younger workers measure up to the educational attainment levels of the national labor force?

* How does educational attainment payoff in employment and earnings for young Pennsylvania workers?

We focus on younger workers in this report because they constitute the **competitive edge** for Pennsylvania's present and future development strategies in the economic transformations that are taking place between states, and between the United States and Japan and the emerging European Economic Community.

## EXECUTIVE SUMMARY

* According to 1991 U.S. Bureau of the Census Current Population Survey data, the Pennsylvania economy faces the 1990s with a majority (64 percent or about 2,100,000) of its young workers ages 15-39 with no more than a high school education. The remaining 36 percent (approximately 1,162,000) of the state's young workers have completed some college (19.1 percent) or have graduated from college (16.6 percent).

* The U.S. Bureau of the Census data show that Pennsylvania is at some competitive economic development **disadvantage** compared to the national young adult labor force because of the lower share of more educated, advanced skilled young workers in this state. Further state-by-state comparisons of the proportion of college graduates in the total adult population showed that Pennsylvania ranked 32nd overall in 1989, and particularly lower in the proportion of college graduates than most northeastern states.

* Educational attainment is an economic development strategy which created major differences in the 1991 recession period unemployment rates of young Pennsylvania workers, from 9.6 percent for high school dropouts to 4.4 percent for college graduates.

* The ability of the state's young workers to hold a full-time instead of a part-time job greatly improved with educational attainment, from 41 percent for high school dropouts in 1991, to 80 percent for high school graduates, and 88 percent for college graduates.

* Educational attainment is extremely important for obtaining a **good** job in the Pennsylvania economy. For example, in 1991 nearly 64 percent of the state's college educated young workers held managerial or professional positions compared to less than 2 percent of high school dropouts in the state's labor force.

* For young workers in this state's economy, a college degree is essential for decent yearly earnings. The average 1990 earnings of $25,004 for young Pennsylvania workers with a college degree compared with an average of about $13,700 for **both** young workers who stopped school with a high school degree and workers who completed some post high school education. Young workers with 17+ years of education earned a higher average of $32,335 in 1990.

* Educational attainment is a powerful strategy for reducing poverty among young Pennsylvania workers. There was more than a seven-times difference between the poverty rate of high school dropouts (20.3 percent) and college graduates (2.8 percent), based on the official U.S. government 1990 poverty level thresholds.

## DATA SOURCES AND DEFINITIONS

This report uses data from the U.S. Bureau of the Census March, 1991 Current Population Survey -- this country's monthly employment survey -- to assess the impact of education on economic development during a period of economic recession in the state. The national sample included 2,339 young Pennsylvania men and women ages 15 - 39 who the Census Bureau officially defined as in the state's civilian labor force in 1991 -- that is they were either working full-time or part-time, or were unemployed and looking for work. Adults not defined as in the civilian labor force by the Census Bureau include housewives, disabled persons, full-time students, members of the armed forces, retirees, and unemployed persons who have stopped looking for work.

On the assumption that the Current Population Survey sampling frame for the state yields a random sample of Pennsylvania workers, the generalized standard error of estimate (at the 5 and 95 percentage points) for this size sample is approximately plus or minus 0.7 percent for basic demographic characteristics such as education and employment.[1]

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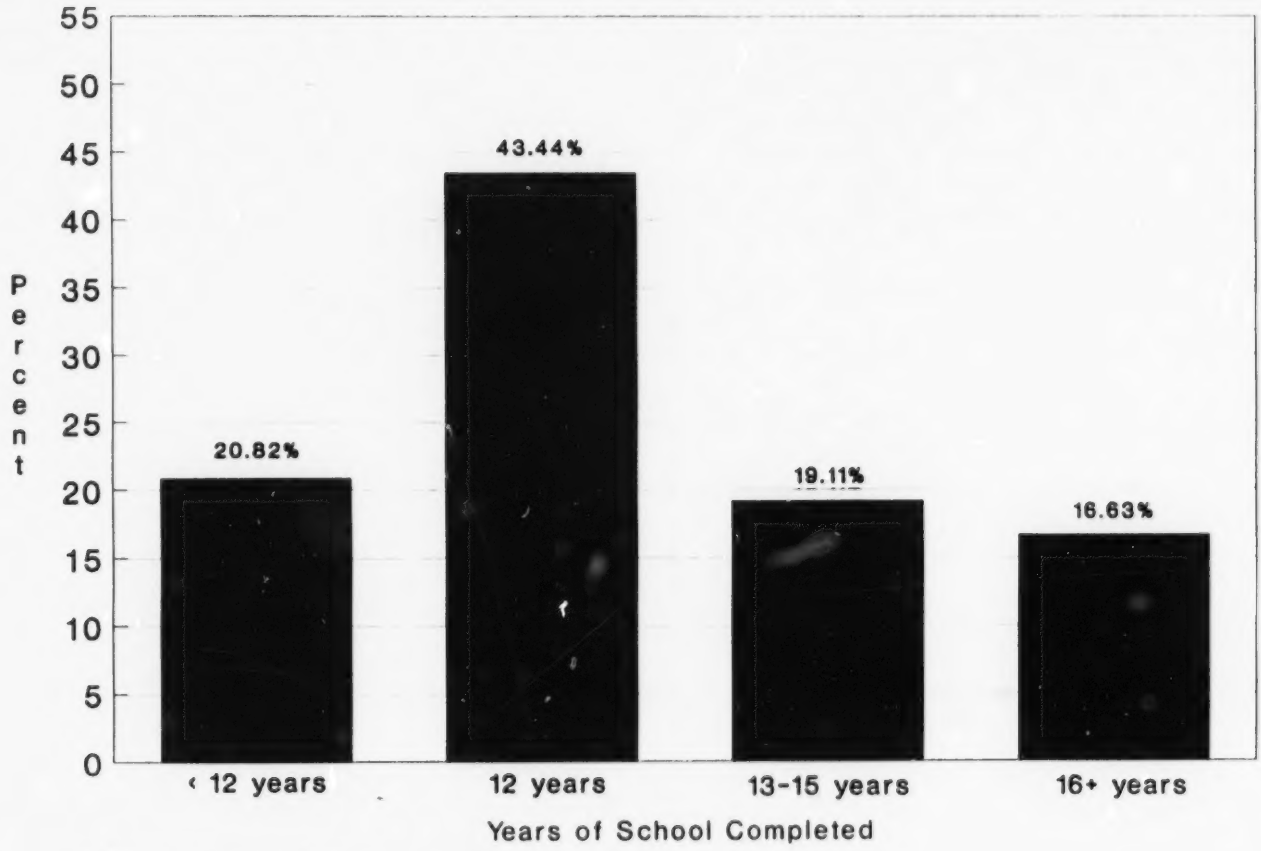
1 U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 428, August, 1988.

## Educational Attainment of Pennsylvania Young Workers, Ages 15-39, in 1991




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

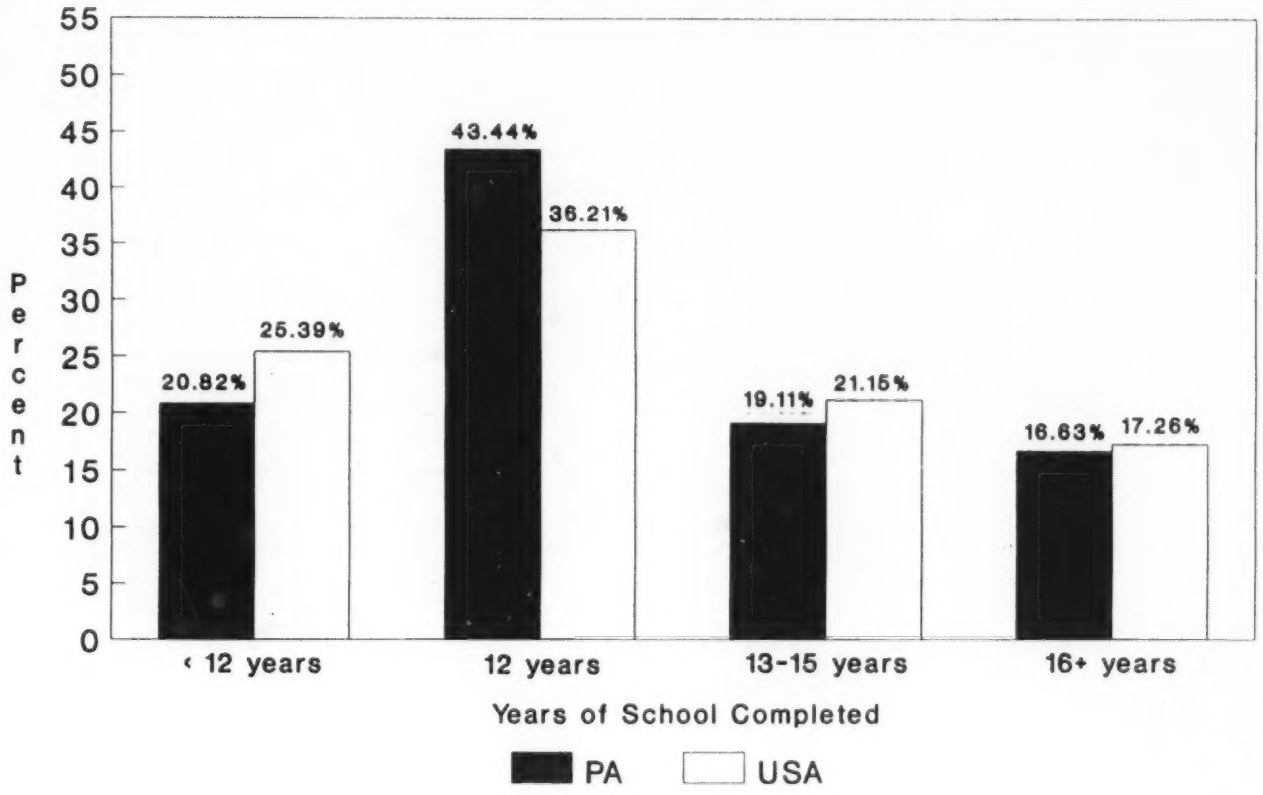
## WHAT IS THE EDUCATIONAL ATTAINMENT LEVEL OF PENNSYLVANIA YOUNG WORKERS IN THE 1990s?

* Of the estimated 3,262,000 young Pennsylvanians ages 15-39 who were in the labor force in March, 1991, just under 21 percent, or about 680,000, had **less** than a high school education. An additional 43 percent had completed only a high school education.

* This means that the state's economy enters the 1990s with the majority (64 percent or about 2,100,000) of its young workers with no more than a high school education.

* The remaining 36 percent (approximately 1,162,000) of the young workers in the Pennsylvania labor force in 1991 had either completed some college work (19.1 percent) or had graduated from college (16.6 percent) in 1991.

Educational Attainment of United States and Pennsylvania
Young Workers, Ages 15-39, in 1991




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

## HOW DOES THE EDUCATIONAL ATTAINMENT LEVEL OF THE YOUNG WORKERS IN PENNSYLVANIA COMPARE WITH NATIONAL LABOR FORCE STANDARDS?

* Based on the Current Population Survey data for 1991, Pennsylvania is at some competitive economic development disadvantage compared to the national young adult labor force because of the lower share of more educated, advanced skilled workers in this state.

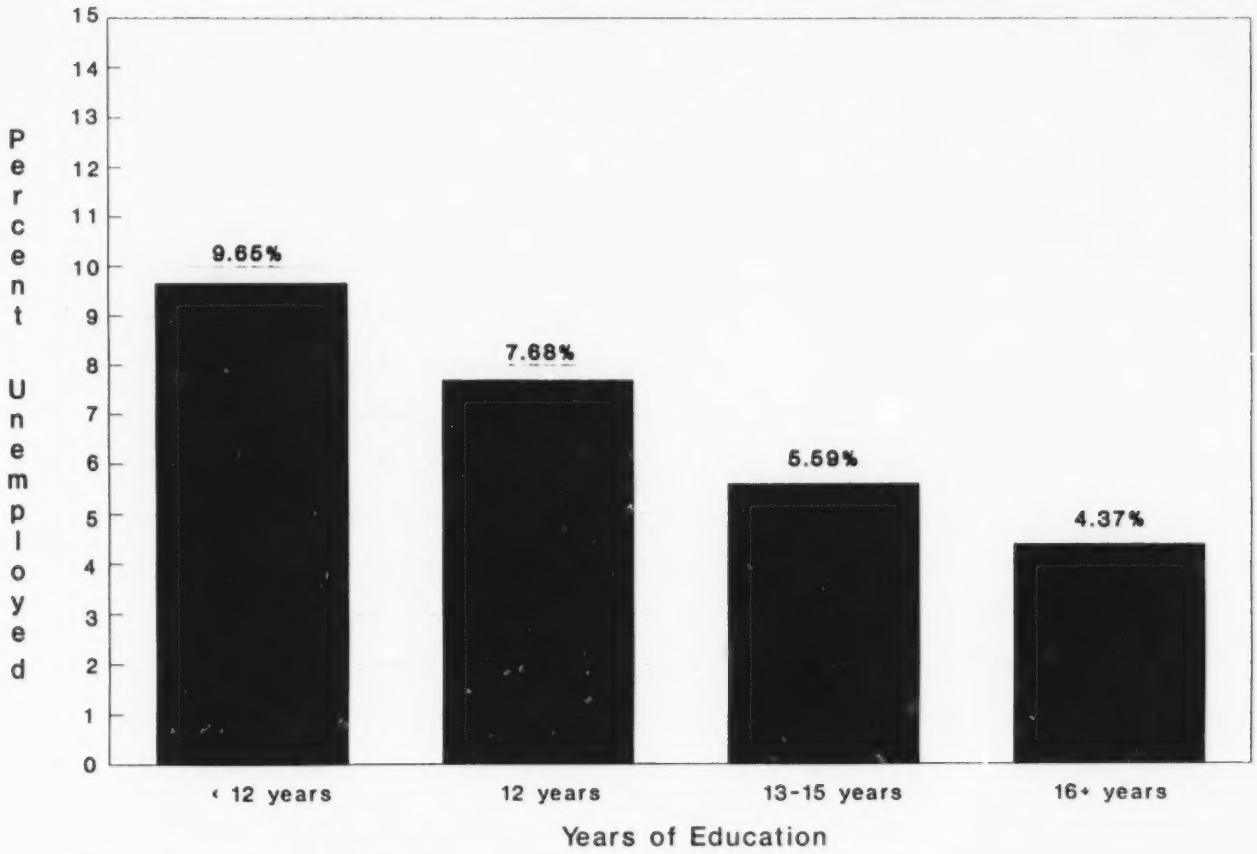
* Relative to the national young worker labor force, Pennsylvania has a **higher** proportion of young workers who stopped their education with a high school degree (PA = 43.4 percent vs. US = 36.2 percent), but a **lower** proportion who obtained some college training (PA = 19.1 percent vs. US = 21.2 percent) or who completed a college degree (Pa = 16.6 percent vs. US = 17.3 percent).

* However, the proportion of high school dropouts in the Pennsylvania young adult labor force was lower than the national average in 1991 (PA = 20.8 percent vs. US = 25.4 percent), indicating a lower proportion of unskilled and semi-skilled workers.

* State-by-state comparisons of the proportion of college graduates in the total adult population, previously published by the U.S. Bureau of the Census (Appendix table), show that Pennsylvania ranked 32nd overall in 1989 and particularly lower than most northeastern states.

* These comparative labor force data show this state's stronger emphasis on elementary and secondary educational attainment of younger workers but weaker emphasis on college educational attainment of younger workers compared to the national labor force averages.

## Unemployment of Pennsylvania Workers, Ages 15-39, by Educational Attainment, 1991




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

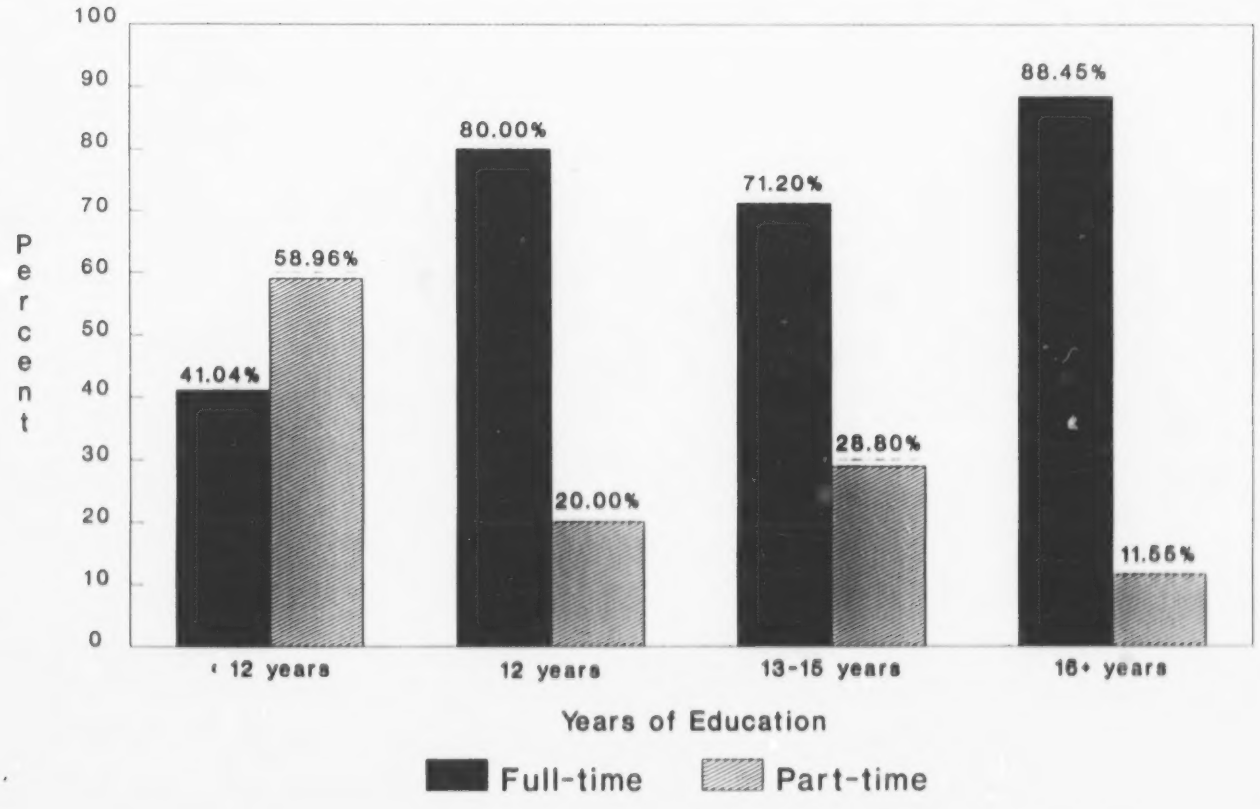
## HOW DOES EDUCATIONAL ATTAINMENT PAYOFF FOR EMPLOYMENT AND UNEMPLOYMENT PATTERNS OF PENNSYLVANIA'S YOUNG ADULT LABOR FORCE?

* The educational level of Pennsylvania's young workers has a dramatic effect on employment and unemployment patterns within the state. In March, 1991 when the state's total unemployment rate was 7.4 percent, the unemployment rate for Pennsylvania's young adult high school dropouts was over 9.6 percent.

* By comparison, the unemployment rate for young adult college graduates in the labor force was 4.4 percent. Thus even in a recession period which put both white and blue collar workers out of work, the unemployment rate was 2.2 times higher for high school dropouts than for college graduates in Pennsylvania.

* These data show that educational attainment is an economic development strategy which reduces unemployment among Pennsylvania young workers.

Full-time and Part-time Employment of Pennsylvania Workers, Ages 15-39, by Educational Attainment, 1991




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

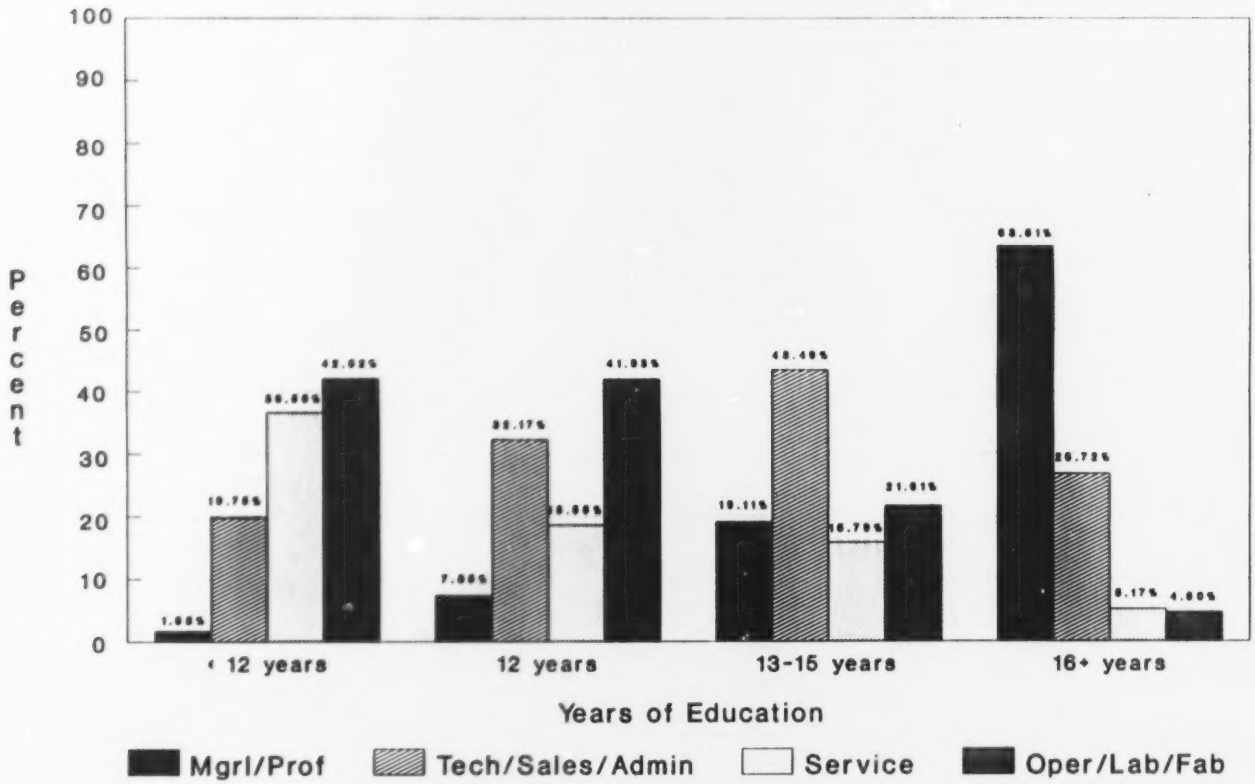
## HOW DOES EDUCATIONAL ATTAINMENT EFFECT FULL-TIME VS PART-TIME EMPLOYMENT OPPORTUNITIES FOR YOUNG PENNSYLVANIA WORKERS?

* It is striking that in 1991 nearly 59 percent of the state's young workers who had not completed high school were employed in part-time jobs, while only 41 percent held full-time employment.

* By comparison, 80 percent of young workers who stopped their education with a high school degree and over 88 percent who attained a college degree were working in full-time jobs in 1991.

* These labor force survey data for Pennsylvania clearly demonstrate the value of educational attainment in finding and retaining a full-time job during a period of economic recession.

## Occupations of Pennsylvania Workers, Ages 15-39, by Educational Attainment, 1991




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

## WHAT IS THE EFFECT OF EDUCATIONAL ATTAINMENT ON THE OCCUPATIONAL SKILLS OF YOUNG PENNSYLVANIA WORKERS?

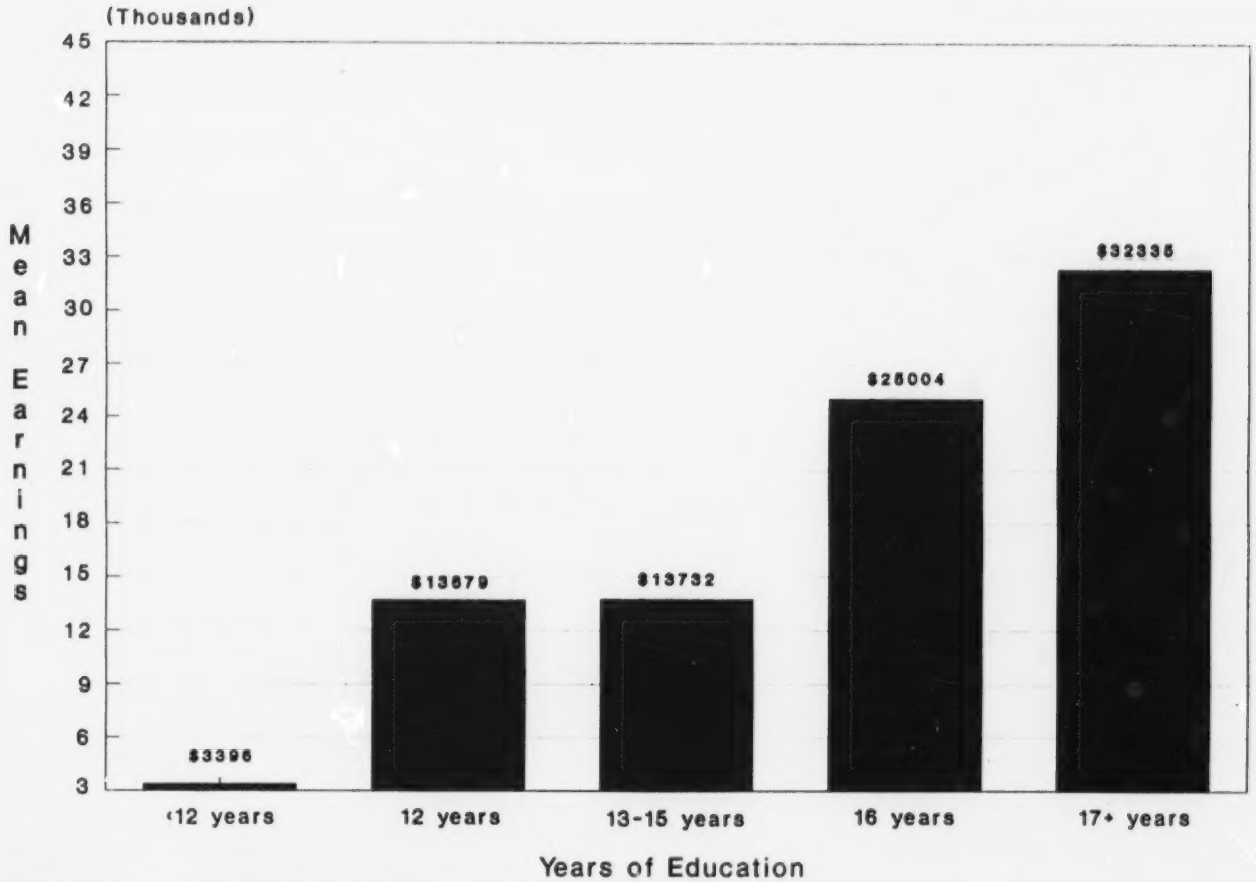
* Educational attainment has a major impact on the kind of jobs young Pennsylvania workers obtain. In 1991, nearly 64 percent of the state's college educated young workers held professional or managerial positions compared to less than 2 percent of high school dropouts in the state's labor force.

* Furthermore, in Pennsylvania's economy relatively few managerial and professional positions are filled by young workers with 1-3 years of college training -- only 19 percent held these occupations. The largest proportion (43 percent) of young workers with some college education were employed in technical, sales, and administrative support positions.

* By comparison, the highest proportion of young Pennsylvania workers (42 percent) who were **both** high school dropouts **and** finished their education with a high school degree held semi-skilled and unskilled positions as operators, fabricators, and laborers.

* The Current Population Survey data clearly show that educational attainment is extremely important to young workers in obtaining a **good** job in this state.

## Earnings of Pennsylvania Workers, Ages 15-39, by Educational Attainment, 1990




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

## HOW DOES EDUCATIONAL ATTAINMENT PAYOFF IN THE EARNINGS OF YOUNG PENNSYLVANIA WORKERS?

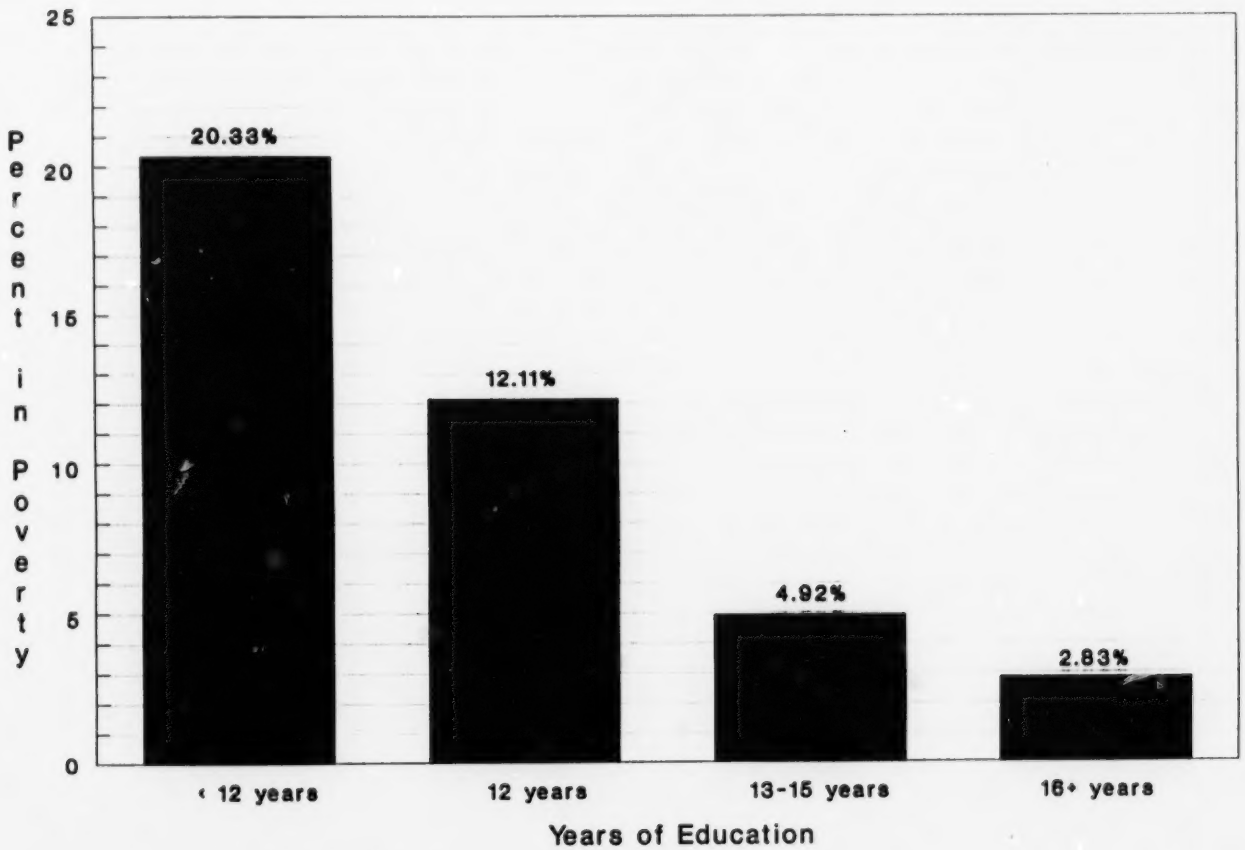
* The national labor force survey data show that the annual earnings of young workers in the Pennsylvania labor force are **greatly** influenced by educational attainment. As has already been shown above, high school dropouts and young workers who stopped their education with a high school degree are much more likely to be unemployed, work part-time, and be employed as operators, fabricators, or laborers than are college educated workers.

* The 1990 average earnings of a young adult Pennsylvania college graduate in the labor force was just over $25,000 compared to about $3,400 for a high school dropout. Young Pennsylvania workers with post-college training had even higher average earnings -- $32,335.

* For young workers in this state's economy, the 1991 survey data show that **a college degree is the threshold** for decent annual earnings. Young workers who stopped their education with a high school degree and those with some college reported nearly the same earnings for the previous year -- about $13,700.

* In summary, educational attainment, particularly attaining a college degree, is an economic development strategy with marked payoffs for young workers in Pennsylvania.

Percent in Poverty Among Pennsylvania Workers,
Ages 15-39, by Educational Attainment, 1990




Source: U.S. Bureau of the Census, 1991 Current Population Survey.

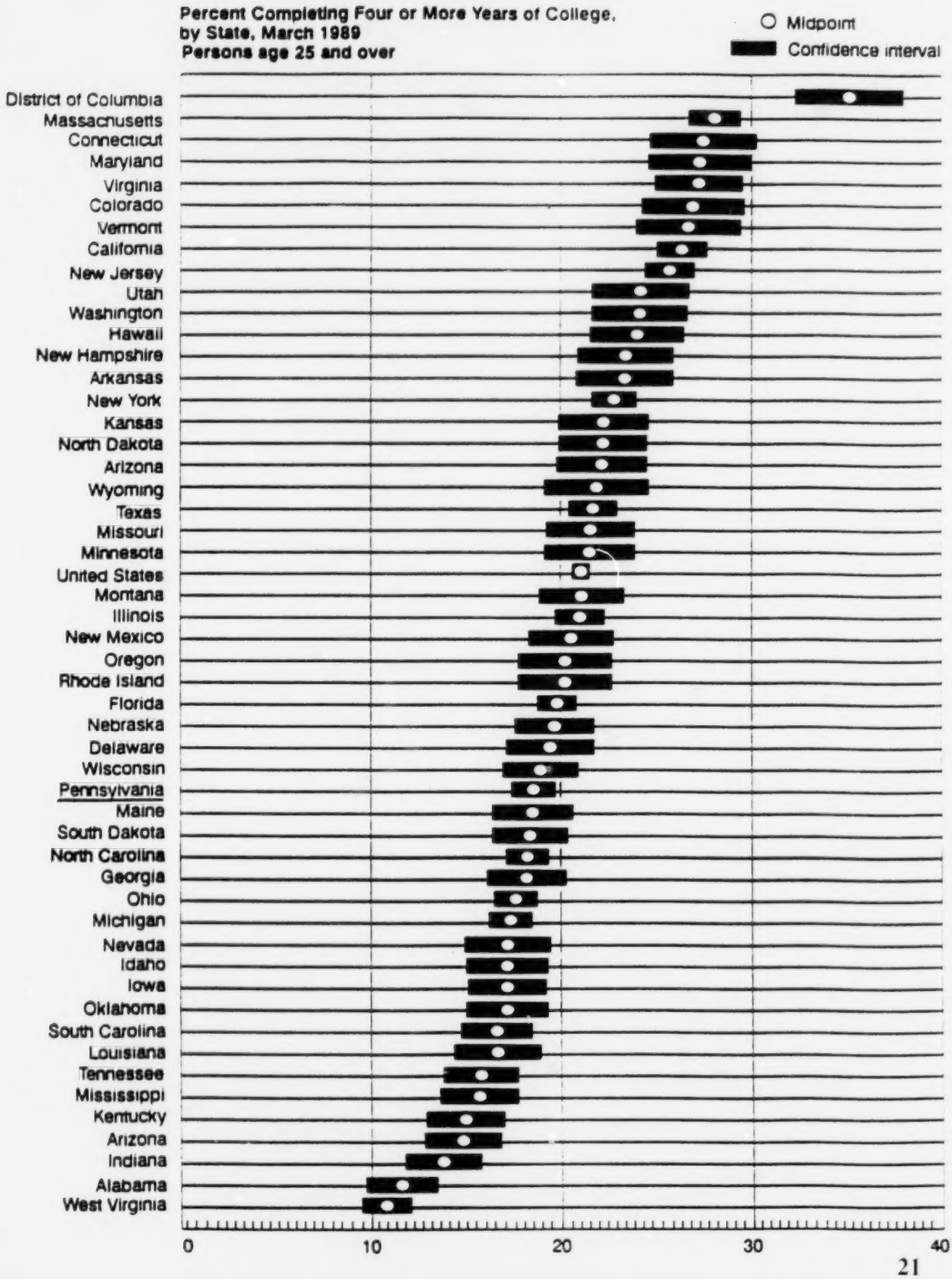
## HOW DOES EDUCATIONAL ATTAINMENT EFFECT POVERTY LEVELS OF YOUNG WORKERS IN THE PENNSYLVANIA LABOR FORCE?

* The likelihood of young Pennsylvania workers having earnings below the official poverty level is clearly determined by educational attainment. Over 20 percent of high school dropouts earned less than the official U.S. government 1990 individual poverty threshold for the working age population ($6,800). While young workers who had completed a high school degree before stopping their education earned more money, still over 12 percent earned less than the individual poverty level.

* By comparison about 5 percent of young Pennsylvania workers who had completed some post-high school work and 3 percent of those who had completed college earned below the official individual poverty threshold in 1990.

* With this over 7-times difference (20.3 percent vs 2.8 percent) between the poverty rate of high school dropouts and college graduates, it is clear that educational attainment is a powerfully important strategy for reducing poverty among young Pennsylvania workers.

## APPENDIX




U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 451, *Educational Attainment in the United States: March 1989 and 1988* U.S. Government Printing Office, Washington, D.C., 1991.